

**Amendment to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (currently amended) A contact pressure sensor comprising:

first and second contact surfaces for being subjected to a contact pressure force and counter-force respectively, the first and second contact surfaces being disposed substantially directly opposite to each other;

a substrate for supporting the sensor, disposed between the first and second contact surfaces;

a contact pressure sensitive layer having comprising a material with piezo-resistive properties sensitive to pressure applied to the contact pressure sensor, the contact pressure sensitive layer having a lattice structure different to the substrate and being disposed between the substrate and the first contact surface;

an insulation a supporting layer disposed between the substrate and the contact pressure sensitive layer and the substrate, the supporting layer having a lattice-matched structure to that of the contact pressure sensitive layer and for supporting the contact pressure sensitive layer on the sensor; [[and]]

a conductive layer disposed [[on]] between the contact pressure sensitive layer for a conductive contact for the sensor, and the first contact surface; and

wherein the contact pressure sensor is arranged such that a pressure resulting from the contact pressure force and the counter-force is applied across the contact pressure sensitive layer.

2. (currently amended) A sensor according to claim 1 wherein the material of the contact pressure sensitive layer is a semi-conductor element from columns III[[B]] $\Delta$  and V[[B]] $\Delta$  of the Mendeleev table.

3. (currently amended) A sensor according to claim 2 wherein the material of the contact pressure sensitive layer is a ternary semi-conductor element from columns III[[B]] $\Delta$  and V[[B]] $\Delta$  of the Mendeleev table.

4. (currently amended) A sensor according to claim 1 wherein the material of the contact pressure sensitive layer comprises more than one layer of different elements from columns III[[B]] $\Delta$  and V[[B]] $\Delta$  of the Mendeleev table.

5. (original) A sensor according to claim 1 wherein the material of the contact pressure sensitive layer is Aluminium Gallium Arsenide (AlGaAs).

6. (original) A sensor according to claim 1 wherein the materials of the insulation layer is Gallium Arsenide (GaAs) and the conductive layer is doped Gallium Arsenide (GaAs).

7. (canceled)

8. (currently amended) A sensor according to claim 1 further comprising: A contact pressure sensor comprising:

first and second contact surfaces for being subjected to a contact pressure force and counter-force respectively, the first and second contact surfaces being disposed substantially directly opposite to each other;

a substrate disposed between the first and second contact surfaces;

a contact pressure sensitive layer comprising a material with piezo-resistive properties, the contact pressure sensitive layer having a lattice structure different to the substrate and being disposed between the substrate and the first contact surface;

a supporting layer disposed between the contact pressure sensitive layer and the substrate, the supporting layer having a lattice-matched structure to that of the contact pressure sensitive layer;

a conductive layer disposed between the contact pressure sensitive layer and the first contact surface; and

a temperature sensitive layer having a material with piezo-resistive properties sensitive to temperature and disposed between the first and second contact surfaces, the temperature sensitive layer having a lattice structure different to the substrate; and

an additional insulation layer disposed between the temperature sensitive layer and the pressure sensitive layers wherein the additional insulation layer has a resistance greater than either of the temperature sensitive layer and the pressure sensitive layer[.].

wherein the contact pressure sensor is arranged such that a pressure resulting from the contact pressure force and the counter-force is applied across the contact pressure sensitive layer.

9. (original) A sensor according to claim 1 wherein a meander pattern is etched on the conductive material to increase the sensitivity of the contact pressure sensor.

10. (original) A sensor according to claim 1 wherein the sensor is arranged to withstanding contact pressure of greater than 40 MPa.

11-20. (Canceled)

21. (new) A sensor according to claim 1 wherein the second contact surface comprises at least a portion of a surface of the substrate facing away from the contact pressure sensitive layer.

22. (new) A sensor according to claim 1 wherein the supporting layer is semi-insulating or insulating.

23. (new) A sensor according to claim 1 wherein the material of the substrate is more robust than a material which is lattice matched with the contact pressure sensitive layer.